



**National
Transportation
Safety Board**

Managing Safety in 2013: Lessons Learned

Robert L. Sumwalt, III

Different Expectations

- There is sometimes a “disconnect” between the expectations of the “customer” and what they are actually getting.



What do your customers want?

- **World class**
 - Top 3 - 5 percent of the industry
 - Organization thrives in seeking to be the very best
- **Best practices**
 - Adopts and implements procedures above and beyond regulatory requirements
- **Basic regulatory compliance**
 - Meets spirit of regulations, but no higher
- **Sub-standard performance**
 - non-adherence to regulations, cutting corners are the norm

Adopted from Pete Agur

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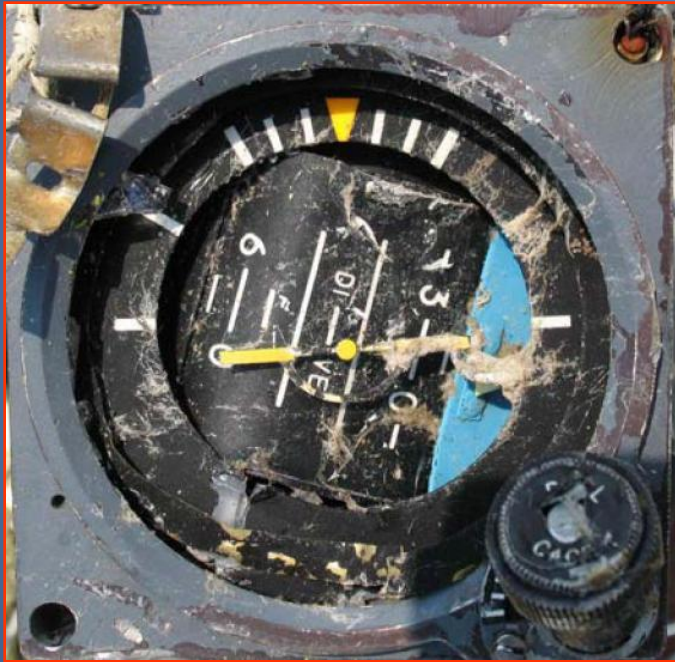
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What is the
attitude of your
business aviation
operation?

June 4, 2007

6 Fatalities







What the investigation found

Captain/chief pilot/check airman

- had prior certificate revocation
- routinely failed to comply with procedures and regulations
- falsified training records

NTSB Finding

- “The pilots’ lack of discipline, in-depth systems knowledge, and adherence to procedures contributed to their inability to cope with anomalies experienced during the accident flight.”

The customer

- Had contracted with this Part 135 operator for 19 years.
- Wanted safe transport for medical personnel, patients, and transport organs.



October 25, 2002



Is this what the customer expected?



- Company check airman: rated company's standardization as "6" (on 1-10 scale)
- Company pilot: "Fair to good"
- Lead ground instructor: "Fair"
 - Suspected that some pilots were following SOPs while others were not
 - Aware that some pilots used their own checklists, instead of company checklists
- Another pilot: never seen any standardized callouts documented in any company manual
 - To compensate, she used callouts she used at another company

Manteo, NC October 1, 2010

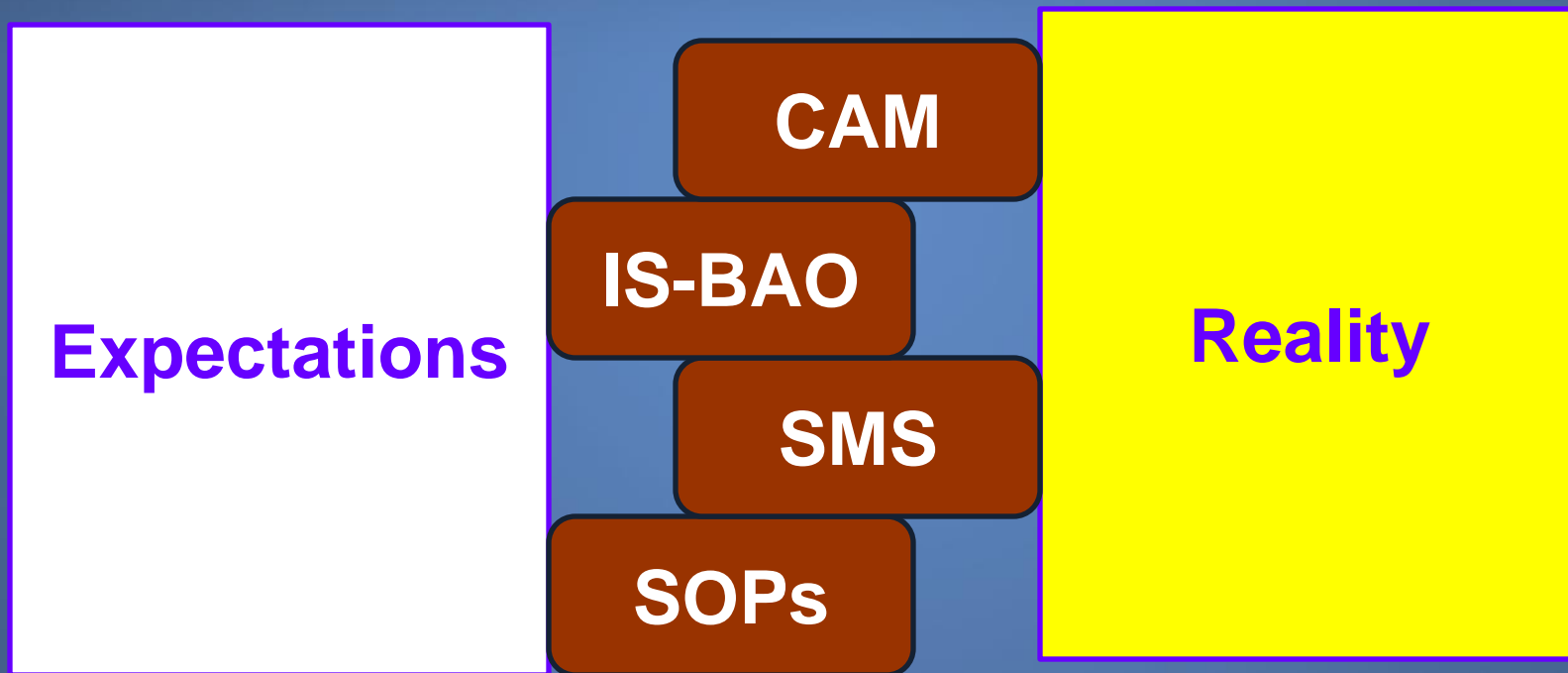


“The pilot told NTSB investigators that the company advised him that they had no immediate need for an airplane and they did not intend to buy a replacement.”

What do customers want?

- Flexibility
- Convenience
- Privacy
- Prestige
- Safety – is safety assumed??

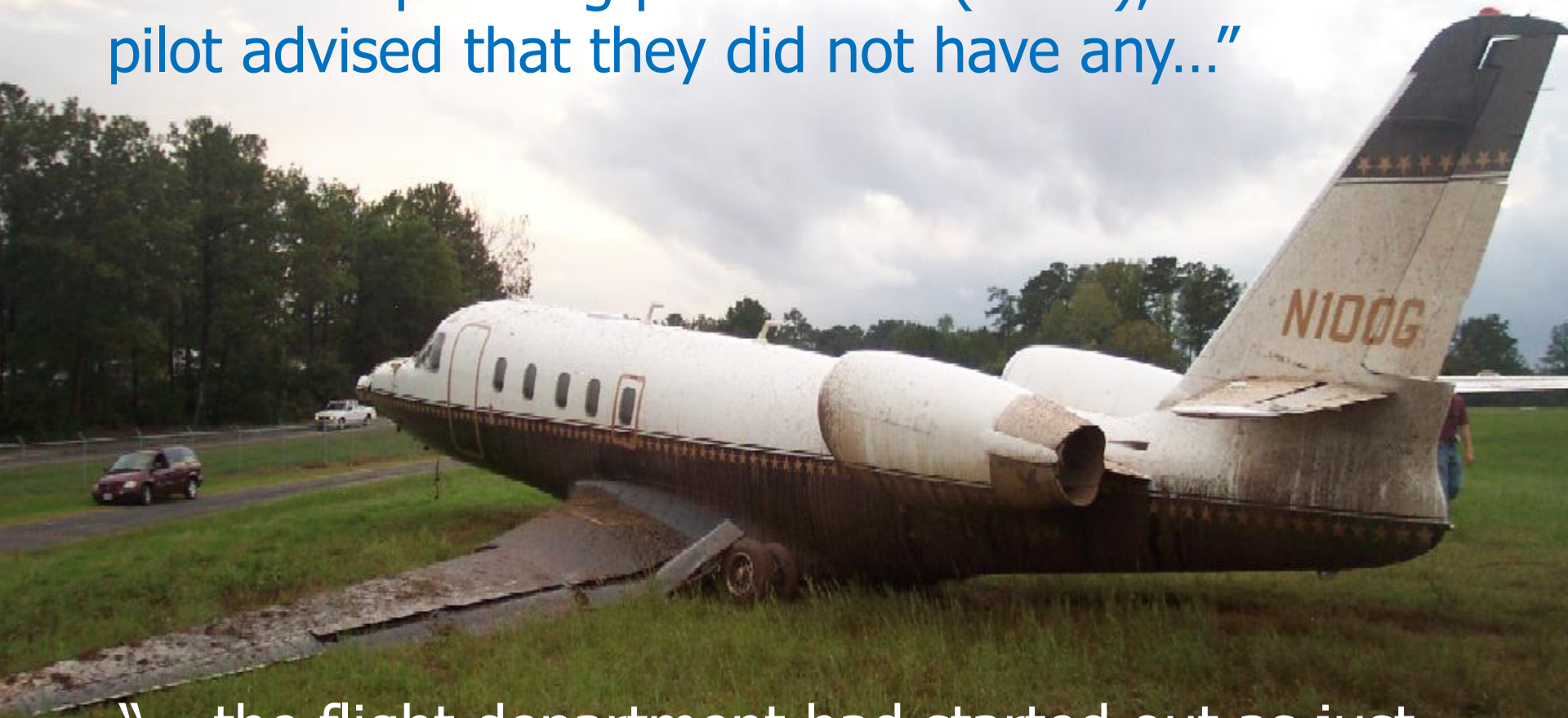
Closing the Expectation Gap



SOPs are Critical

- The NTSB has found problems with SOPs as a consistent theme with many aircraft accidents.
 - Organizations lack adequate SOPs standards
 - Organizations don't adhere to their SOPs
 - Flight crew intentionally disregard SOPs

“When asked about the flight department's standard operating procedures (SOPs), the chief pilot advised that they did not have any...”



“... the flight department had started out as just one pilot and one airplane, and that they now had five pilots and two airplanes...”

09 14 2007

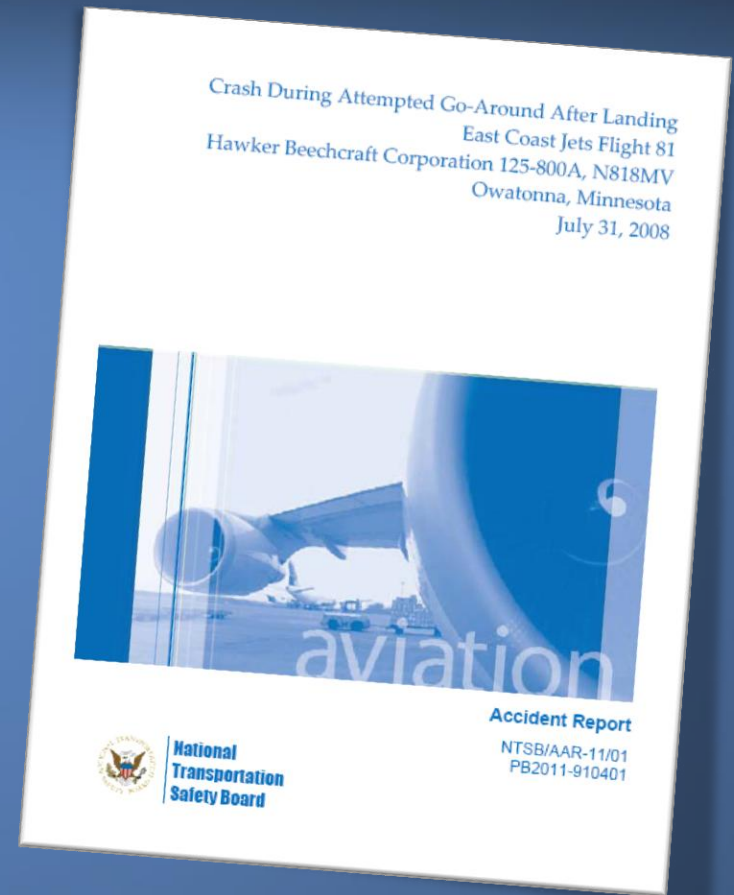
East Coast Jets

July 31, 2007 8 fatalities



From East Coast Jets accident report

“Well-designed cockpit procedures are an effective countermeasure against operational errors, and disciplined compliance with SOPs, including strict cockpit discipline, provides the basis for effective crew coordination and performance.”



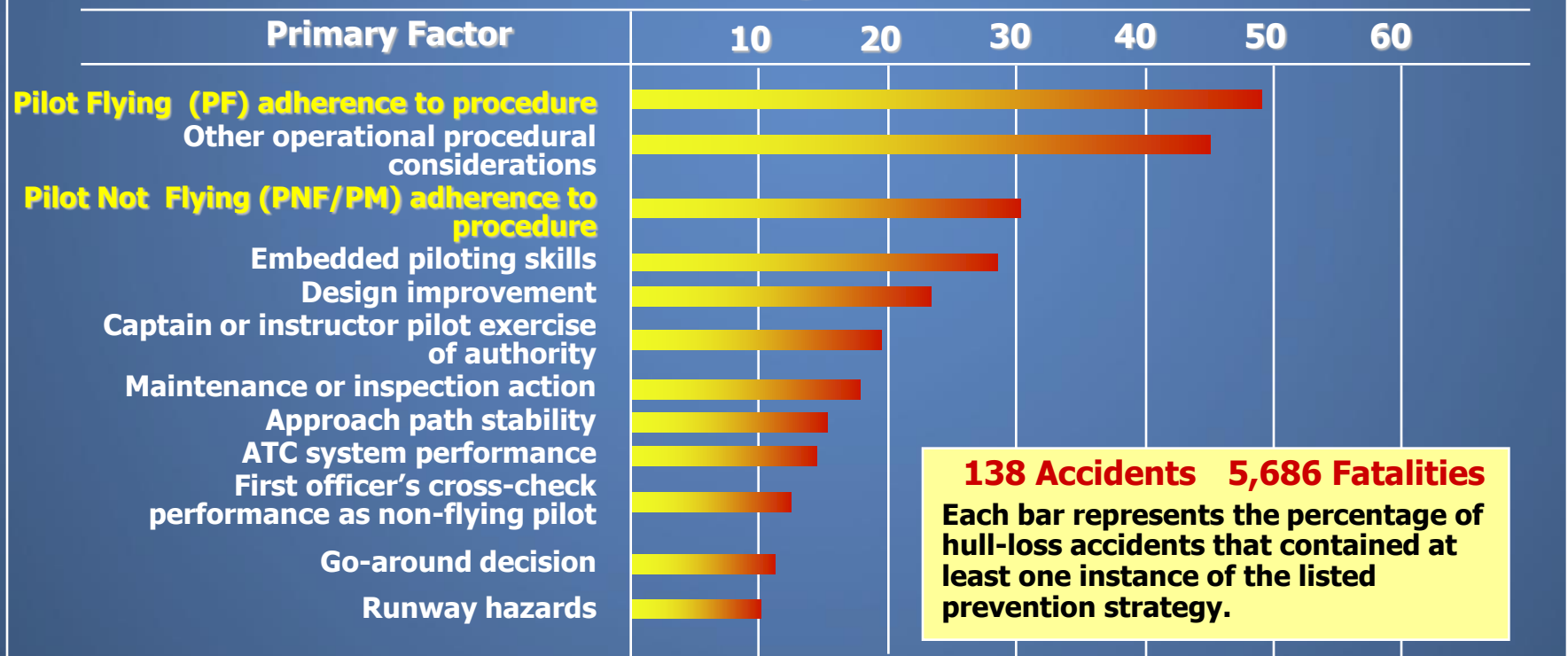
WHY SOPS ARE CRITICAL

Accident Prevention Strategies

Source: Boeing study of accident prevention strategies

Hull-loss Accidents over 10 Year Period

Percentage of Accidents

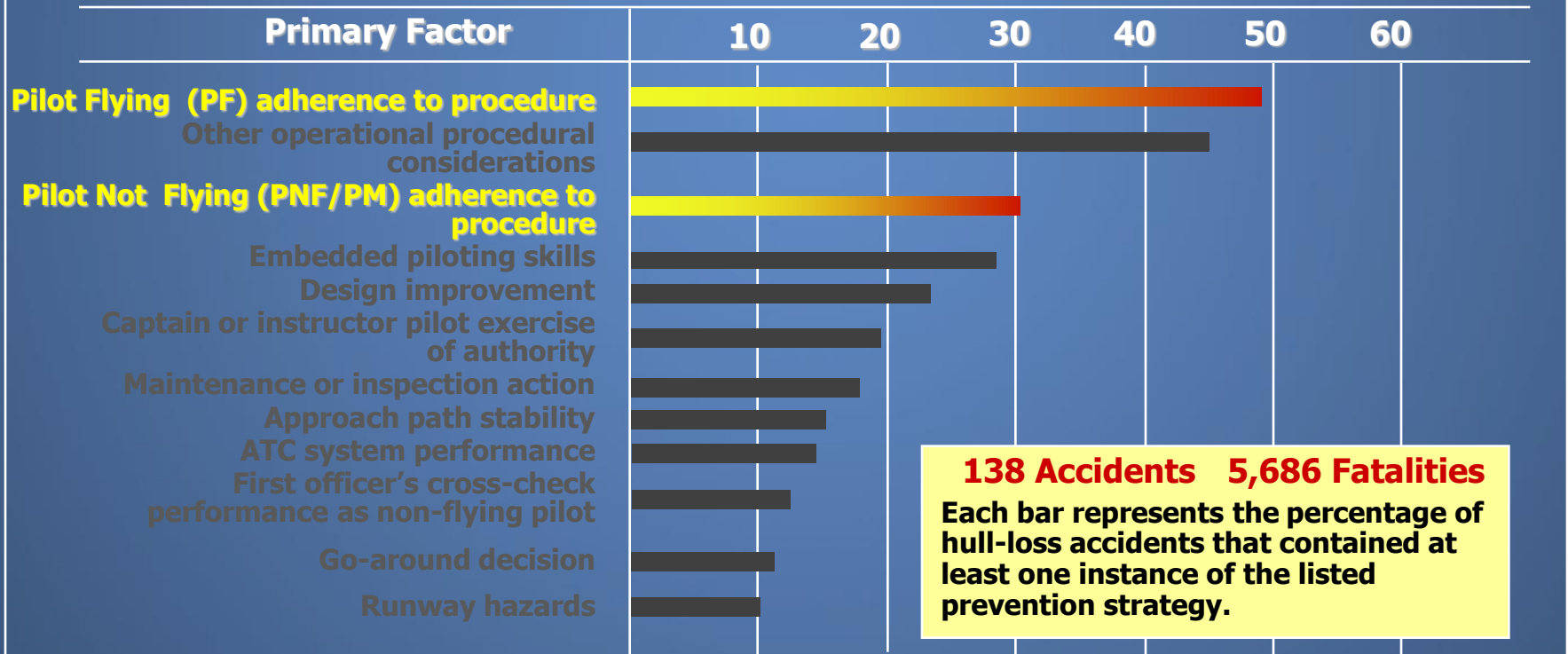


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Lautman-Gallimore Study

- Found that having a strong commitment to standardization and discipline were among the “key elements of safe operations” observed in a Boeing study.
- “Cockpit procedural language is tightly controlled to maintain consistency and to avoid confusion from non-standard callouts Callouts and responses are done verbatim”

Intentional non-compliance leads to other problems

- LOSA data revealed that, compared to crews who followed SOPs, crewmembers who intentionally deviated from procedures:
 - averaged making 3 times more errors
 - mismanaged more errors
 - found themselves in more undesired aircraft situations.

Things to think about

- Do you have clearly defined, well thought-out SOPs?
- If so, do you insist on rigorous adherence to those procedures?
- How do you measure adherence?
- Do you reward the right kinds of behavior?



Recommendations for

DEVELOPING AND OBTAINING COMPLIANCE WITH SOPS

Begin by:

- Realizing that well-designed SOPs are essential for safety
- Making a strong commitment for procedural compliance to be a priority and a core value of the organization
 - simply having the procedures is not enough
 - religiously following them – and insisting they be followed – must be a way of doing business.

Then

- Go through all manuals, checklists, and procedures.
- Change those that that don't work, are not clear, are outdated, and/or are not followed.



If people aren't following it...

change it.

CHECKLIST

Shoulder HarnessesSECURED

Take Off Brieting.....COMPLETE

Transponder

CHECKLIST

Shoulder HarnessesFASTENED

Take Off Brieting.....COMPLETE

TransponderON

CHECKLIST

Shoulder HarnessesON

Take Off Brieting.....COMPLETE

TransponderON

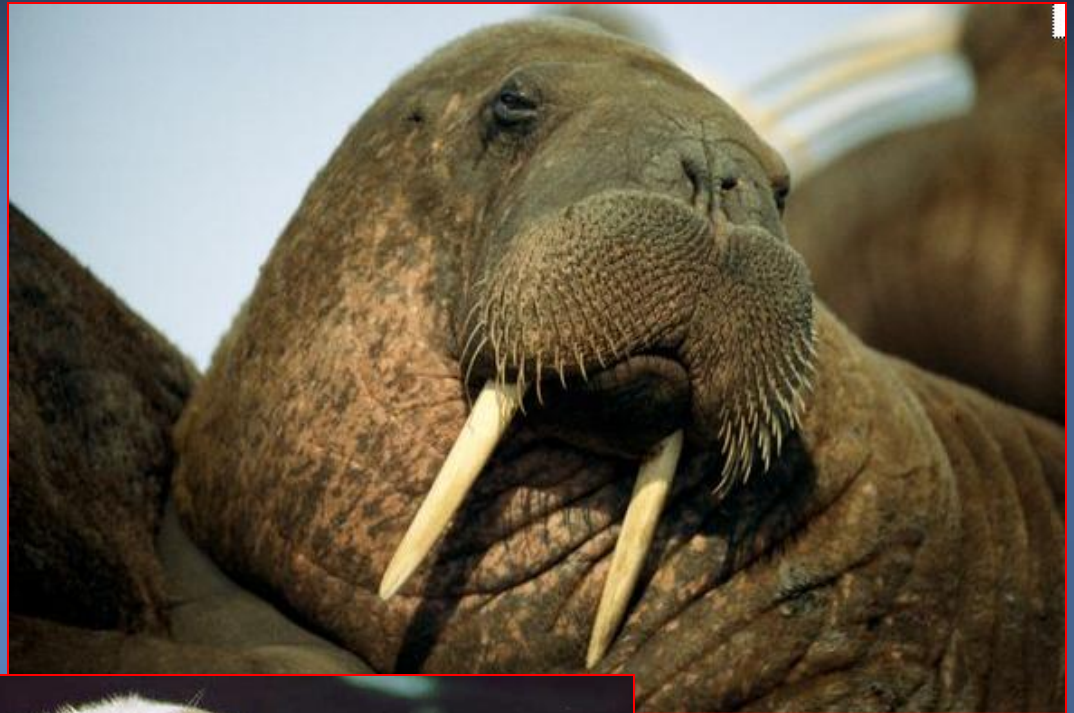


NTSB

Establishing a culture of procedural compliance

- Procedures must not be developed in a vacuum - they must have the input of those who are expected to use them.
- Also, it is critical that crewmembers understand the reason for the procedures.
- Avoid seals, sea otters, and walruses.
- Avoid “Normalization of deviance”
- Avoid selective compliance

Seals, sea otters, and walruses



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Seals, sea otters, and walruses



Deepwater Horizon

Seals, sea otters, and walruses

BP Spill Response Plan for Deepwater Horizon at that Location:

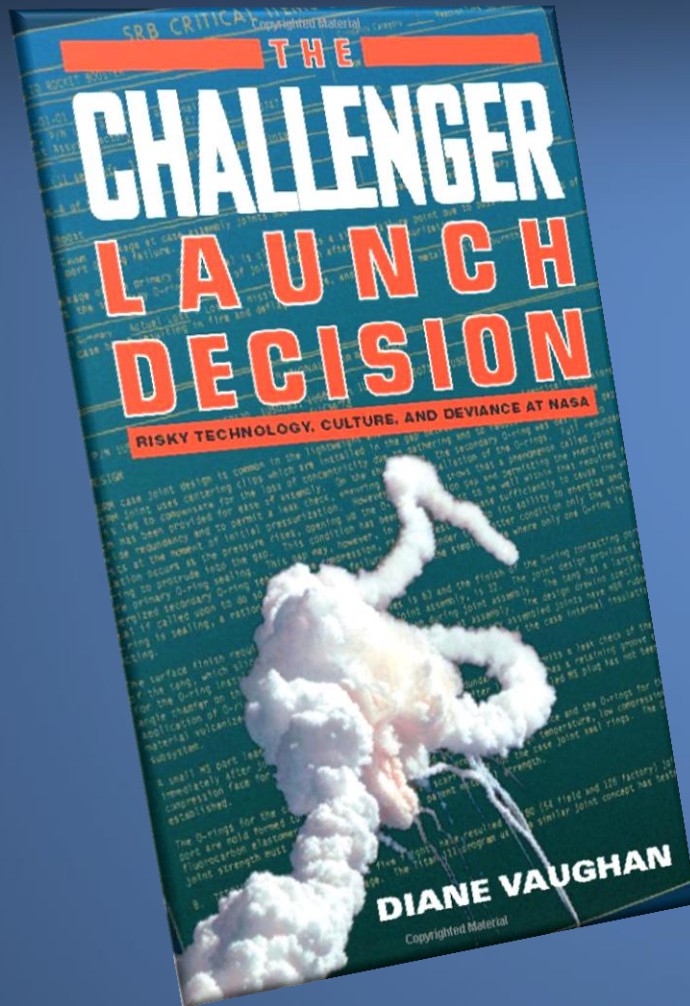
- Listed a wildlife specialist at University of Miami
 - He left University of Miami 20 years earlier
 - Died 4 years before the plan was even *published*
- Listed incorrect names and phone numbers for marine life specialists in Texas
- Listed spill response companies that no longer existed
- Listed instructions for how to deal with seals, sea otters, and walruses
 - None of these mammals even live in the Gulf of Mexico

Avoid seals, sea otters, and walruses

In other words...

Make sure your procedures reflect
the way you intend to operate,
and then operate that way.

Avoid “Normalization of Deviance”



- Normalization of Deviance: When not following procedures and taking “short cuts” and becomes an accepted practice.

Avoid Selective Compliance



- “That is a stupid rule.”
- “I don’t have to comply with that one.”



GWBA 7th Annual Safety Standdown



NTSB

Quality Assurance

- Audit for compliance

**“What gets measured gets done.
What gets measured and fed back gets done well.
What gets rewarded gets repeated.”**

■ John E. Jones

- The goal is precision – not perfection.



In Summary

- The people that pay for your services are expecting and counting on a professionally-managed operation.
- Developing and ensuring compliance with SOPs forms a strong foundation for providing professional operations.



GWBA 7th Annual Safety Standdown



NTSB



National Transportation Safety Board